

5     What is claimed is:

1. A ball joint comprising in combination:

- (i) an elongated shaft having an upper end and a lower end and having a longitudinal axis running through said upper end and said lower end, said elongated shaft  
10     being threaded on the lower end;
- (ii) a ball rigidly fixed and surmounted on the upper end of the elongated shaft, said ball, at the highest point opposite the attachment of the elongated shaft, having a truncated flat face;
- (iii) a retaining member having an upper surface and a lower end, said  
15     retaining member having a lubricating port located in the upper surface thereof, the lubricating port being openly connected to a duct, said duct providing a passageway for lubricants from the lubricating port to the truncated flat face of the ball, said retaining member being externally threaded on the retaining member lower end;
- (iv) a housing having an outside surface, a middle portion, and a lower  
20     end, said housing being internally conformed at the lower end to seat the ball and provide pivotal movement about the longitudinal axis of the elongated shaft for the ball relative to the housing, said middle portion of the housing being internally threaded to receive the retaining member therein and said middle portion having a means for attaching the housing to a support arm of a suspension system;
- (v) a fastening means for fastening the retaining member in the housing.  
25

30

5     2. A ball joint system comprising in combination:

          (i) an elongated shaft having an upper end and a lower end and having a longitudinal axis running through said upper end and said lower end, said elongated shaft being threaded on the lower end;

          (ii) a ball rigidly fixed and surmounted on the upper end of the elongated  
10 shaft, said ball, at the highest point opposite the attachment of the elongated shaft, having a truncated flat face;

          (iii) a retaining member having an upper surface and a lower end, said retaining member having a lubricating port located in the upper surface thereof, the lubricating port being openly connected to a duct, said duct providing a passageway for  
15 lubricants from the lubricating port to the truncated flat face of the ball, said retaining member being externally threaded on the retaining member lower end;

          (iv) a housing having an outside surface, a middle portion, and a lower end, said housing being internally conformed at the lower end to seat the ball and provide pivotal movement about the longitudinal axis of the elongated shaft for the ball relative to  
20 the housing, said middle portion of the housing being internally threaded to receive the retaining member therein and said middle portion having a means to attach the housing to a support arm of a suspension system;

          (v) a fastening means for fastening the retaining member in the housing  
and,

25           (vi) a socket, said socket comprising a cylindrical housing having an internal surface said internal surface being threaded to receive the housing therein, said socket having a means of attachment for attachment near a terminal end of a carrier for the ball joint system.

30     3. An automotive suspension system wherein there is provided an upper ball joint system and a lower ball joint system as claimed in claim 2

4. A ball joint as claimed in claim 1 wherein the means for attaching the housing to the support arm of the suspension system is external threads on the external surface of the middle portion of the housing.

5. A ball joint as claimed in claim 1 wherein the means for attaching the housing to the support arm of the suspension system is a flange that can be secured to the support arm by at least one detachable pin.

6. A ball joint as claimed in claim 5 wherein the pin is a bolt secured by a nut.

7. A ball joint as claimed in claim 1 wherein the means for attaching the housing to the support arms of the suspension system is a compression fit of the housing into openings in the support arms.

15

20

25

30

35

40